

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicants/Contact names and addresses:

Big Lake Enterprises, LLC
PO Box 200
Lakeside, MT 59922

2. Type of action: Groundwater Application for Beneficial Water Use Permit 76LJ 30149121

3. Water source name: Groundwater

4. Location affected by project: Goose Meadows Subdivision Resub L4 & 5 Lots 1-8, and Goose Meadows Subdivision Resub L6 Lot 2, W2SW Section 8, Township 27N, Range 20W, Flathead County, Montana.

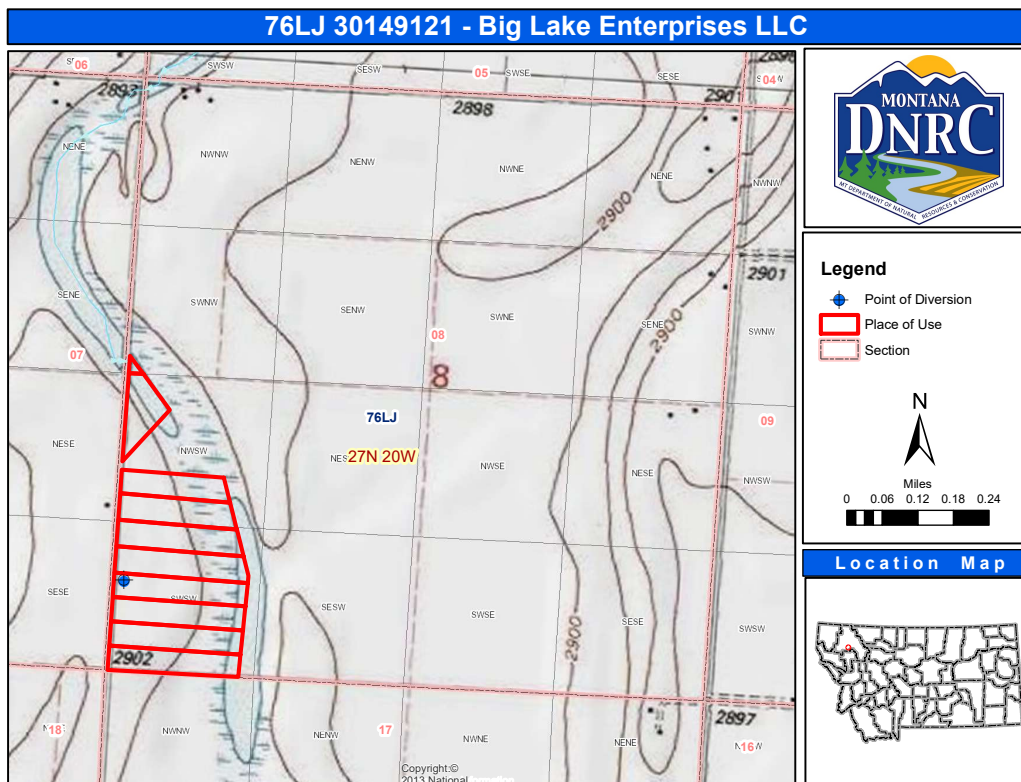


Figure 1. Map of the proposed place of use and point of diversion.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to divert groundwater by means of a single production well (Goose Meadows West well, hereafter GMW) from January 1 – December 31 at 100.0 GPM up to a volume of 22.3 AF for multiple domestic use for nine (9) single-family residences (5.8 AF) from January 1 – December 31 and for irrigation of 8.5 acres of lawn and garden (16.5 AF) from April 15 – October 15. The well serves the multi-user water system of the nine (9) lot subdivision comprised of Lots 1-8 of the Goose Meadows Subdivision Re-subdivision of Lots 4 & 5 and Lot 2 of the Goose Meadows Subdivision Re-subdivision of Lot 6 (hereafter collectively referred to as the Goose Meadows West Subdivision). The GMW production well (GWIC # 307706) is completed in the Flathead Deep Aquifer to a depth of 660-feet below ground surface (bgs) and is hydraulically connected to the Flathead River and Flathead Lake.

The point of diversion (POD) is located in Lot 5 of the Goose Meadows Subdivision Re-subdivision of Lots 4 & 5, in the NWSWSW Section 8, Township 27N, Range 20W, Flathead County, Montana. The place of use (POU) is the Goose Meadows West Subdivision in the W2SW Section 8, Township 27N, Range 20W, Flathead County, Montana (Figure 1). The POD is in the Upper Flathead River Basin (76LJ) in an area that is not subject to water right basin closures or controlled groundwater area restrictions.

The DNRC shall issue a water use permit if the applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

- U.S. Fish and Wildlife Service (USFWS): National Wetlands Inventory Wetlands Mapper
- Montana Natural Heritage Program: Endangered, Threatened Species, and Species of Special Concern
- Montana Department of Fish Wildlife & Parks (DFWP): Dewatered Stream Information
- Montana Department of Environmental Quality (MDEQ): Clean Water Act Information Center
- U.S. Natural Resource Conservation Service (NRCS): Web Soil Survey

Part II. Environmental Review

1. Environmental Impact Checklist:

<h2>PHYSICAL ENVIRONMENT</h2>

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Applicant plans to divert water from the Flathead Deep Aquifer. The groundwater levels in the Deep Aquifer are effectively controlled by the stage of the Flathead River and Flathead Lake due to these sources being hydraulically connected to the Deep Aquifer. The mainstem of the Flathead River/Lake are included on the DFWP list of chronically or periodically dewatered streams.

Determination: No significant impact.

Water quality - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

According to the MDEQ Clean Water Act Information Center's 2020 Water Quality Information, the Flathead River has not been assessed for Beneficial Use Support. Flathead Lake is listed as "Not Fully Supporting" for aquatic life due to Mercury (no TMDL completed), Total Nitrogen (TMDL completed), Total Phosphorus (TMDL completed), and Polychlorinated Biphenyls (no TMDL completed). The Flathead River's Water Quality Category is "3," meaning there is insufficient data to assess the use-support of any applicable beneficial use; no use-support determinations have been made. Flathead Lake's Water Quality Category is "5," meaning one or more applicable beneficial uses are impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat.

Determination: No significant impact.

Groundwater - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The Applicant will divert groundwater from the Flathead Deep Aquifer at a rate of 100.0 GPM. The well is completed to 660 feet below ground surface. A Department analysis of Applicant supplied data from a 9-hour drawdown and yield test concluded that there is a sufficient supply of groundwater in the source aquifer to satisfy the proposed appropriation.

The aquifer is hydraulically connected to the Flathead River beginning in Section 9, Township 27N, Range 20W, and Flathead Lake. The Department calculated that a constant year-round depletion to the listed surface water sources of 7.5 GPM will result from the proposed appropriation. A physical and legal availability analysis, as well as an adverse effect analysis of

these sources was performed, and the Department concluded that surface water quality and supply would not be adversely affected by the proposed appropriation.

Determination: No significant impact.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The applicant proposes to supply water to the nine (9) residential lots of the Goose Meadows West subdivision by means of one (1) well, GMW (GWIC # 307706), which is completed in the Flathead Deep Alluvial Aquifer to 660-feet bgs. GMW is equipped with a Grundfos SP85S-9 10-hp submersible pump controlled by a variable frequency drive (VFD), an 80-ft length of two-inch galvanized drop pipe, a Well-X-Trol WX-302 pressure tank, 1,925-ft of three-inch PVC/HDPE distribution/transmission lines, and 250-ft of one-inch individual PVC/HDPE service lines. Based on the results of the 9-hour drawdown and yield test performed by the applicant, the well is capable of sustained diversion of water at the requested flow rate of 100.0 GPM.

A pump house will be constructed on Lot 5 of the Goose Meadows West subdivision which will house a two-inch recordal disk volumetric flow meter, the pressure tank, and VFD controls. Water will be diverted based on resident water demands. The pressure tank and VFD controller will work in combination to prevent water hammer effects and short cycling of the well pump. The Applicant evaluated the worst-case maximum peak flow for the northern distribution line (line to the farthest supply line connection) and calculated a total dynamic head (TDH) of 290 feet. Based on the supplied pump specification curve, the pump is capable of supplying 100.0 GPM at a TDH of 290 feet.

Since this is a groundwater appropriation, there will be no channel impacts, flow modifications, barriers, dams, or riparian impacts to the nearby surface waters.

Determination: No significant impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program website was reviewed to determine if there are any threatened or endangered fish, wildlife, plants, aquatic species, or any "species of special concern" in Township 27N, Range 20W that could be impacted by the proposed project. 12 animal and seven (7) plant species of concern (Tables 1 and 2, respectively) were identified within the township and range where the project is located. Of these species, the Grizzly Bear (*Ursus arctos*) and the Bull Trout (*Salvelinus confluentus*) are listed as threatened by the USFWS. An adequate quantity of water will still exist in the surface water source to maintain

existing populations of Bull Trout, should they exist there currently. This general area is already highly developed, and it is not anticipated that any species of concern will be further impacted by the proposed project.

Table 1. Animal Species of Concern			
Grizzly Bear (<i>Ursus arctos</i>)	Brown Creeper (<i>Certhia americana</i>)	Cassin's Finch (<i>Haemorhous cassinii</i>)	Bull Trout (<i>Salvelinus confluentus</i>)
Hoary Bat (<i>Lasiurus cinereus</i>)	Evening Grosbeak (<i>Coccothraustes vespertinus</i>)	Common Tern (<i>Sterna hirundo</i>)	Pygmy Whitefish (<i>Prosopium coulteri</i>)
Little Brown Myotis (<i>Myotis lucifugus</i>)	Great Blue Heron (<i>Ardea herodias</i>)	Pileated Woodpecker (<i>Dryocopus pileatus</i>)	Westslope Cutthroat Trout (<i>Oncorhynchus clarkii lewisi</i>)

Table 2. Plant Species of Concern			
Howell's Quillwort (<i>Isoetes howellii</i>)	Bristly Sedge (<i>Carex comosa</i>)	Giant Helleborine (<i>Epipactis gigantea</i>)	Columbia Water-meal (<i>Wolffia columbiana</i>)
Straightbeak Buttercup (<i>Ranunculus orthorhynchus</i>)	Panic Grass (<i>Dichanthelium acuminatum</i>)	Guadalupe Water-nymph (<i>Najas guadalupensis</i>)	

Determination: No significant impact.

Wetlands - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

Based upon the USFWS maps, the eastern edge of the development contains Freshwater Emergent Wetlands. Construction of homes/garages and areas that will be landscaped are to the west of the wetland areas.

Determination: No significant impact.

Ponds - For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

Based upon the USFWS maps, the eastern edge of the development contains Freshwater Ponds. Construction of homes/garages and areas that will be landscaped are to the west of the ponded areas.

Determination: No significant impact.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Irrigation of approximately 8.5 acres of lawn and garden may have a negative impact on the soil quality, stability, or moisture content. Some soils (refer to Table 3, below) in the project area are classified as moderately saline to strongly saline and the wetlands/ponded areas along the eastern edge of the project area are classified as Saline-Alkali lands where saline seep has already occurred from natural drainage, previous agricultural practices, or both.

Table 3. Soils		
Soil Unit Description	Capacity to Transmit Water	Salinity
Kalispell loam, moderately deep over sand, 3 to 7 percent slopes	Moderately high to high	Very slightly saline
Kalispell loam, moderately deep over sand, 7 to 12 percent slopes	Moderately high to high	Very slightly saline
Saline-Alkali land	Very low to moderately low	Moderately saline to strongly saline
Somers silty clay loam, 0 to 3 percent slopes	Moderately high	Nonsaline to very slightly saline
Somers silty clay loam, 3 to 8 percent slopes	Moderately high	Nonsaline to very slightly saline
Somers silt loam, 0 to 3 percent slopes	Moderately high	Nonsaline to very slightly saline
Tuffit-Somers silty clay loams, 0 to 5 percent slopes	Moderately low to moderately high	Moderately saline to strongly saline

Determination: Potential for additional or continued saline seep in areas where saline seep has likely historically occurred along eastern portion of project area.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

The project is in an area where existing native vegetation has already been historically disturbed. It is not anticipated that issuance of a water use permit will contribute to the establishment or spread of noxious weeds in the project area. Noxious weed prevention and control will be the responsibility of the landowners, who must follow local noxious weed regulations.

Determination: No significant impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

There will be no impact to air quality associated with issuance of the proposed permit for beneficial use of groundwater.

Determination: No significant impact.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: N/A, project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water, and energy not already addressed.*

All impacts to land, water, and energy have been identified and no further impacts are anticipated.

Determination: No significant impact.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is consistent with planned land uses.

Determination: No significant impact.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter, or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness.

Determination: No significant impact.

HUMAN HEALTH - *Assess whether the proposed project impacts human health.*

No negative impact on human health is anticipated from this proposed use.

Determination: No significant impact.

PRIVATE PROPERTY - Assess whether there are any government regulatory impacts on private property rights.

Yes___ No X If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No impact.

OTHER HUMAN ENVIRONMENTAL ISSUES - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

(a) Cultural uniqueness and diversity? None identified.

(b) Local and state tax base and tax revenues? None identified.

(c) Existing land uses? Undeveloped land becoming residential development.

(d) Quantity and distribution of employment? None identified.

(e) Distribution and density of population and housing? Adding housing, and thus housing distribution will be denser in this area.

(f) Demands for government services? None identified.

(g) Industrial and commercial activity? None identified.

(h) Utilities? None identified.

(i) Transportation? None identified.

(j) Safety? None identified.

(k) Other appropriate social and economic circumstances? None identified.

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: None identified.

Cumulative Impacts: None identified.

3. *Describe any mitigation/stipulation measures:*

None.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

The only alternative to the proposed action would be the no action alternative. The no action alternative would not authorize the diversion of groundwater.

Part III. Conclusion

1. Preferred Alternative

Issue a water use permit if the Applicants prove the criteria in 85-2-311 MCA are met.

2. Comments and Responses

None.

3. Finding:

Yes ___ No **X** Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No significant impacts related to the proposed project have been identified.

Name of person(s) responsible for preparation of EA:

Name: Travis Wilson

Title: Water Resource Specialist

Date: October 29, 2020